Certificate of Electronic Transmission

I hereby certify that this correspondence is being electronically transmitted to the U.S. Patent and Trademark Office via EFS-WEB on August 10, 2009.

Kevin E. Kuehn Reg. No. 51,904 — August 10, 2009 Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.:	10/554,081
Applicant:	Wang, Wenhao
Art Unit:	1797
Examiner:	Po, Ming Cheung
Title:	Nano-Granule Fuel Oil And Its Preparation
Attorney Docket:	KINW-01
Confirmation No.:	4483

August 10, 2009

Mail Stop Amendment
Commissioner of Patents
P. O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF WENHAO WANG PURSUANT TO 37 CFR §1.132

I, Wenhao Wang, declare as follows:

1. I am currently president of Beijing Yuantong Co., Ltd. and have held this position since 1985.

2. I am the inventor of the invention claimed in U.S. Application No. 10/554,081 (the '081 application.)

3. I have conducted research and development work on fuel treatment for in excess of 20 years.

4. I have read the outstanding Office Action mailed June 10, 2009, and I understand the Patent Office's stated position.

5. I have studied CN ZL94113646.9 to Wenhao ("Wenhao '646.9") and U.S. Patent No. 5,985,153 to Dolan et al. ("Dolan '153"), a combination of which the Office Action cites for the stated obvious rejections of claims 1-10 and 12-15. I am the named inventor of the invention described in Wenhao '646.9.

6. I disagree that a combination of Wenhao '646.9 and Dolan '153 renders claims 1-10 and 12-15 obvious as explained below.

7. I had the device described in Wenhoa '646.9 tested in 1996 by the Chinese Research Academy of Environmental Sciences. The device described in Wenhao '646.9 was connected to the internal combustion engine of a car and the rate of fuel consumption and the CO discharge were tested according to standard procedures. This is substantially the same standard procedure that I used to measure the data that I included in the '081 application. The test results are shown in Exhibit A. Exhibit A is a Test Report issued by the Chinese Research Academy of Environmental Sciences in October 1996.

8. In particular, fuel was treated with a device according to Fig. 1 of Wenhao '646.9. The permanent magnets 2 and 3 were made of NF30 and were 20 mm in diameter and 20 mm in height. Each magnet had a coercive force of 18,000 Oersteds and a magnetic field intensity of 4,600 Gauss. The two permanent magnets were positioned with N poles opposing each other and separated by a gap. The gap between the two magnets was 2.0 mm. Magnetic circuit sheets of DT4 iron had a diameter of 20 mm and thickness of 5 mm.

9. As can be seen from Exhibit A, the rate of fuel saving for the device according to Wenhao '646.9 was 6.0% and the CO discharge reduction was 26.1%.

10. In comparison, for a device of the present '081 application, as shown in Example 6, which is found on page 11 of the '081 application, the rate of fuel saving was at least 30.4% and the CO discharge reduction was at least 35% by using the device of the '081 application.

11. In my opinion, the improvement in the rate of fuel saving from 6% to 30.4% and the

improvement in the CO discharge reduction from 26.1% to at least 35%, as evidenced by comparing the data in the '081 application with the data in Exhibit A, is unexpected.

12. I have been warned that any materially false, fictitious or fraudulent statement or representation may be punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that any such statement or representation may jeopardize the validity of this document. I declare that I am properly authorized to execute this document, that all statements made of my own knowledge are true, and that all statements made on information and belief are believed to be true.

2009. 8. 10.

Date

Wenhao Wang

Exhibit A

No. HKY 96 — 01 — 06

检 验 报 告

产品名称 远通牌 EPS 型高效环保节油器

受检单位 北京远通有限责任公司

检验类别 认证检验

发送日期 1996 年 10 月

中国环境科学研究院

2. 捷达轿车一辆。试验车辆参数见表 9。

表 9 试验车辆参数

车 型	捷达 Jetta-CL	车辆生产厂家	长春 一汽
整车编号	TW003601	车辆生产日期	1996 年
车辆基准质量 kg	1070	里程表读数 km	20045
当量惯量 kg	1130	发动机型号	EA 827
档位	4 档	排量 [ ]	1.6
轮胎压力 kpa	250/320	额定功率	53 kW
车辆牌照号	京 C/D6235		

三、检验方法说明

1. 检验基本条件符合 GB 11642 、GB/T 3845 、GB/T 12543 的要求。

2. 原车和安装节油器试验之前分别对车辆进行怠速最佳调整。怠速排放测量，均为工况法试验结束后，由分析仪直接取样自动进行。

3. 节油器的安装、预运行及调整

按照样品使用说明书的要求安装节油器，运行约 800 公里，再进行安装节油器后的怠速最佳调整和各项性能检测。

检验设备、样品描述及检验方法说明

检用主要仪器、设备

表 8 主要检验仪器、设备

序号	设备名称	型号	生产厂家
1	直流电力底盘测功机	CTDY — 1211	日本 HORIBA
2	定容取样系统	CVS 9100	日本 HORIBA
3	汽车排气分析系统	MEXA 9400	日本 HORIBA
4	非接触式车速仪	LC — 5100	日本 小野
5	便携式汽车排气分析仪	MEXA 554 GE	日本 HORIBA
6	点火正时仪/发动机转速计	DA — 5100	台湾

检验对象描述

1. 北京远通有限责任公司所生产的远通牌 EPS 型高效环保节油器样品外观如下：

[illegible]性能检验结果

表 6 加速性能检验结果

[illegible]	项 目	原 车	装节油器	动力性能变化	平均变化
[illegible]	最高档(四档) 40km/h 加速至 100km/h 所用时间 〔秒〕	27.47	21.51	+21.7%	+20.6%
[illegible]	次高档(三档) 35km/h 加速至 100km/h 所用时间 〔秒〕	20.25	16.17	+20.1%	
[illegible]	超步换档加速 0~100km/h 所用时间〔秒〕	23.64	18.93	+19.9%	

检验结果

1. 十五工况排气污染物排放量及燃油消耗量检验结果

1) 原车

表 2 原车十五工况排放检验结果

项 目	THC	CO	NOx	CO_2
排放总量 [克/检验]	14.45	129.67	5.43	869.19
平均排放量 [克/公里]	3.58	32.07	1.34	215.01
燃油消耗 [升/百公里]	11.02			

2) 装节油器

表 3 安装节油器后十五工况排放检验结果

项 目	THC	CO	NOx	CO_2
排放总量 [克/试验]	11.80	96.07	6.11	866.45
平均排放量 [克/公里]	2.91	23.69	1.51	213.60
燃油消耗 [升/百公里]	10.36			

3) 检验结果对比

表 4 十五工况检验结果对比

项 目	THC [g/km]	CO [g/km]	HC、CO 平均	油耗 [l/100km]
原 车	3.58	32.07		11.02
装节油器	2.91	23.69		10.36
净化率/节油率	18.7%	26.1%	22.4%	6.0%

2. 怠速污染物排放量检验结果

表 5 怠速污染物排放量检验结果

项 目	怠 速		
	原车	装节油器	净化率
转速 r/min	880	850	
CO %	6.94	5.01	27.8%
HC ppm	821	747	9.0%
CO、HC平均			18.4%

表 1

样品名称	远通牌高效环保节油器	型号规格	EPS 型
受检单位	北京远通有限责任公司	样品来源	抽样
抽样人	刘希玲	抽样时间	1996 年 10 月
样品数量	1 个		
检验及判定依据	1. GB 11642 — 89 轻型汽车排气污染物测量方法 2. GB/T 3845 — 93 汽油车排气污染物的测量　怠速法 3. GB/T 14951 — 94 汽车节油技术评定方法 4. GB/T 12543 — 90 汽车加速性能检验方法		
检验项目	1. 轻型汽车十五工况排气污染物排放量对比 2. 轻型汽车十五工况燃油消耗量对比 3. 怠速排放量对比 4. 整车加速性能对比		
检验时间	1996.10.21.-1996.11	检验地点	中国环境科学研究院 大气所 汽车排放实验室
检验结论	经检验，北京远通有限责任公司所生产的远通牌 EPS 型高效环保节油器对汽车所排放污染物有一定的净化效果，且动力性能、经济性能有所改善。 (1) 排放性能 其十五工况污染物排放量的 CO 、 HC 的净化率分别为 26.1%和 18.7%, CO 和 HC 的平均净化率为 22.4%; 其怠速污染物排放量的 CO 和 HC 的净化率分别为 27.8%和 9.0%, CO 和 HC 的平均净化率为 18.4%。 (2) 燃油经济性能 安装该节油器后，燃油经济性有所改善，节油率为 6.0%。 (3) 动力性能 安装该节油器后，动力性能有明显改善，平均增加 20.6%。 其检验结果见后:		
备　注	本次检验根据环科[1996]445 号文《关于开展汽车排放在环保产品认定工作的通知》进行。		

批准：　　审核：

English Translation of Exhibit A

No. HKY 96-01-06

Test Report

Product Name:	Yuantong EPS High Efficiency Environmental Protection Fuel Economizer
Tested Unit:	Beijing Yuantong Co., Ltd.
Test Type:	For Certification
Date of Notification:	October, 1996

Chinese Research Academy of Environmental Sciences

[Seal of Chinese Research Academy of Environmental Sciences]

Table 1

Sample Name	Yuantong High Efficiency Environmental Protection Fuel Economizer	Model	EPS type
Tested Unit	Beijing Yuantong Co., Ltd.	Sample Source	By sampling
Sampling People	Xiling LIU	Sampling Date	October, 1996
Quantity	1		
Test Methods	1. GB 11642-89 Measurement of light-duty automotive emission 2. GB/T 3845-93 Measurement of gasoline automotive emission –idling method 3. GB/T 14951-94 Measurement method of fuel saving technique for automobiles 4. GB/T 12543-90 Measurement method of acceleration performance for automibiles		
Test Items	1. Comparison on the emission amount of the exhaust pollutants from light-duty vehicle under 15-mode test cycle 2. Comparison on the fuel consumption of light-duty vehicle under 15-mode test cycle 3. Comparison on the emission amount at idle speed 4. Comparison on the acceleration performance of the whole vehicle		
Test Period	October 21, 1996--November, 1996	Test Place	Vehicle Emission Lab, Institute of Atmosphere, Chinese Research Academy of Environmental Sciences
Conclusions	Through the tests, it was found that Yuantong High Efficiency Environmental Protection Fuel Economizer manufactured by Beijing Yuantong Co., Ltd. displayed a certain degree of effect for purifying the pollutants emitted by the vehicle, and the dynamic performance and the economic performance of the vehicle were improved. 1. Emission performance The purification rates for CO and HC in exhaust pollutants under 15-mode test cycle were 26.1% and 18.7% respectively, and the average purification rate for CO and HC was 22.4%. The purification rates for CO and HC in exhaust pollutants at idle speed were 27.8% and 9.0% respectively, and the average purification rate for CO and HC was 18.4%. 2. Fuel Economy After the fuel economizer was installed, fuel economy of the vehicle was improved and the fuel saving rate was 6.0%. 3. Dynamic performance After the fuel economizer was installed, the dynamic performance was improved with an average increase of 20.6%. Test results are made as follows.		
Remarks	The present test was made in accordance with the *Notification of Certification of Environmental Protection Products (1996')* HuanKe [1996] No. 445.		

Approved by Yixing ZHOU Reviewed by TANG Examined by Ying YUAN (chief)

[Seal of Vehicle Emission Test Lab of Chinese Research Academy of Environmental Science

TEST RESULTS

1. Test results on the emission amount of the exhaust pollutants and the fuel consumption under 15-mode test cycle

1) The original vehicle

Table 2 Test results of the original vehicle under 15-mode test cycle

Item	THC	CO	NOx	CO_2
Total emission amount (g/test)	14.45	129.67	5.43	869.19
Average emission amount (g/Kilometer)	3.58	32.07	1.34	215.01
Fuel consumption (L/100 Kilometers)	11.02			

2) After installing the fuel economizer

Table 3 Test results under 15-mode test cycle after installing the fuel economizer

Item	THC	CO	NOx	CO_2
Total emission amount (g/test)	11.80	96.07	6.11	866.45
Average emission amount (g/Kilometer)	2.91	23.69	1.51	213.60
Fuel consumption (L/100 km)	10.36			

3) Comparison on test results

Table 4 Comparison on test results under 15-mode test cycle

Item	THC (g/km)	CO (g/km)	Average of HC and CO	Fuel consumption (1/100 km)
The original vehicle	3.58	32.07	/	11.02
After installing the fuel economizer	2.91	23.69	/	10.36
Purification rate/fuel saving rate	18.7%	26.1%	22.4%	6.0%

2. Test results on the emission amount of the exhaust pollutants at idle speed

Table 5 Test results on the emission amount of the exhaust pollutants at idle speed

Item	At idle speed		
	The original vehicle	After installing the fuel economizer	Purification rate
Rotation speed r/min	880	850	/
CO %	6.94	5.01	27.8%
HC ppm	821	747	9.0%
Average of CO and HC	/	/	18.4%

3. Test results on the acceleration performance

Table 6 Test results on the acceleration performance

No.	Item	The original vehicle	After installing the fuel economizer	Change in dynamic performance	Average change
1	Time for acceleration from 40 km/h to 100 km/h at high gear (4^{th} gear) (s)	27.47	21.51	+ 21.7%	+ 20.6%
2	Time for acceleration from 35 km/h to 100 km/h at inferior high gear (3^{rd} gear) (s)	20.25	16.17	+ 20.1%	
3	Time for acceleration from 0 to 100 km/h at start-up/ switching gear (s)	23.64	18.93	+ 19.9%	

Enclosed: notes for test equipments, sample description and test methods

I. Primary instruments and devices used in the test

Table 8 Primary test instruments and devices

No.	Device name	Model	Manufacturer
1	DC motor chassis dynamometer	CTDY-1211	JP HORIBA
2	Constant volume sampling system	CVS 9100	JP HORIBA
3	Vehicle exhaust analysis system	MEXA 9400	JP HORIBA
4	Non-contact speedometer	LC-5100	JP Ono
5	Portable vehicle exhaust analyzer	MEXA 554 GE	JP HORIBA
6	Ignition timing instrument/engine rotational speed tachometer	DA-5100	Taiwan

II. Description of test object

1. The appearance photo of sample Yuantong High Efficiency Environmental Protection Fuel Economizer manufactured by Beijing Yuantong Co., Ltd. is shown as follows.

2. One Jetta sedan. The paramcters for tcsting the vehicle are listed in Table 9.

Table 9 The parameters for testing the vehicle

Model	Jetta-CL	Manufacturer	Changchun Yiqi
Whole vehicle code	TW003601	Manufacture date	1996
Vehicle reference mass kg	1070	Odometer reading km	20045
Equivalent inertia kg	1130	Engine model	EA 827
Gear	4 gears	Displacement (L)	1.6
Tire pressure kpa	250/320	Rated power capability	53 kW
Vehicle plate No.	Jing C/D6235		

III. Notes for test methods

1. The basic test conditions are in accordance with the requirement as set forth in GB 11642, GB/T 3845 and GB/T 12543.

2. The original vehicle and the vehicle before installing the fuel economizer were adjusted respectively for their best mode at idle speed. Their emissions at idle speed were tested again by an analyzer with automatically sampling setup after the tests had been performed under running mode.

3. The installation, running and adjustment of the fuel economizer
The fuel economizer was installed according to the manual. After running for about 800 km, the vehicle was adjusted for its best mode at idle speed and tested for its various performances with the fuel economizer installed.